

CLAIMS

What is claimed is:

1. A computer system having a CPU, a BIOS ROM to store a BIOS to perform a POST, and a power supply part to supply power to the CPU and the BIOS ROM, comprising:
 - a temperature sensor to detect an internal temperature of the CPU;
 - a power control circuit to cut off the power supplied from the power supply part when the internal temperature of the CPU detected by the temperature sensor exceeds a predetermined monitoring reference temperature;
 - a CPU cooling part to cool the CPU according to the internal temperature of the CPU detected by the temperature sensor; and
 - a selection part to selectively connect the temperature sensor to one of the power control circuit and the CPU cooling part,wherein the temperature sensor is connected to the power control circuit in an initial power supply, and wherein the BIOS that is stored in the BIOS ROM controls the selection part so that the temperature sensor is connectable to the CPU cooling part during the performing of the POST.
2. The computer system according to claim 1, wherein the power control circuit comprises:
 - a monitoring circuit to generate a predetermined power controlling signal when the internal temperature of the CPU that is detected by the temperature sensor exceeds the predetermined monitoring reference temperature; and
 - a power cut-off circuit to cut off the power of the power supply part when the predetermined power controlling signal is inputted from the monitoring circuit.
3. The computer system according to claim 2, wherein the selection part comprises:
 - a first switching circuit to be turned on/off so that the temperature sensor and the power control circuit are connected and/or disconnected;
 - a second switching circuit to be turned on/off so that the temperature sensor and the CPU cooling part are connected and/or disconnected; and
 - a switching control circuit to selectively turn on one of the first switching circuit and the second switching circuit.

4. The computer system according to claim 3, wherein the switching control circuit turns on the first switching circuit and turns off the second switching circuit so that the temperature sensor is connected to the power control circuit when power is initially supplied.

5. The computer system according to claim 4, wherein the BIOS that is stored in the BIOS ROM controls the switching control circuit so that the first switching circuit is turned off and the second switching circuit is turned on, to thereby allow the temperature sensor and the CPU cooling part to be connected to each other during the POST.

6. The computer system according to claim 5, wherein the CPU cooling part comprises:

- a cooling fan to cool the CPU;
- a fan driving part to drive the cooling fan; and
- a fan driving controller to control the fan driving part according to the internal temperature of the CPU that is detected by the temperature sensor.

7. The computer system according to claim 6, wherein the fan driving controller comprises an I/O controller to control an input/output of the computer system.

8. The computer system according to claim 7, wherein when the second switching circuit is on, the I/O controller controls the power cut-off circuit to cut off the power supplied from the power supply part when the internal temperature of the CPU detected by the temperature sensor exceeds a predetermined BIOS reference temperature.

9. The computer system according to claim 8, wherein the BIOS ROM stores information of the predetermined BIOS reference temperature.

10. The computer system according to claim 4, wherein the BIOS that is stored in the BIOS ROM controls the switching control circuit so that the first switching circuit is turned off and the second switching circuit is turned on, to thereby allow the temperature sensor and the CPU cooling part to be connected to each other when the POST is ended.

11. A control method of a computer system having a CPU, a BIOS ROM storing a BIOS to perform a POST, a power supply part supplying power to the CPU and the BIOS ROM,

a power control circuit to cut off the power supplied from the power supply part, and a CPU cooling part cooling the CPU, comprising:

detecting an internal temperature of the CPU;

inputting information of the internal temperature of the CPU to the power control circuit in an initial power supply; and

cutting off the information of the internal temperature of the CPU inputted to the power control circuit, and inputting the information of the internal temperature of the CPU to the CPU cooling part.

12. The control method of the computer system according to claim 11, wherein the inputting the information of the internal temperature of the CPU to the power control circuit comprises:

allowing the power control circuit to cut off the power supplied from the power supply part when the internal temperature of the CPU exceeds a predetermined monitoring reference temperature.

13. The control method of the computer system according to claim 11, wherein the cutting off the information of the internal temperature of the CPU inputted to the power control circuit, and the inputting the information of the internal temperature of the CPU to the CPU cooling part are performed when the POST is ended.

14. The control method of the computer system according to claim 13, wherein the power control circuit comprises a monitoring circuit generating a predetermined power controlling signal when the internal temperature of the CPU detected by the temperature sensor exceeds the predetermined monitoring reference temperature, and a power cut-off circuit to cut off the power from the power supply part when the power controlling signal is inputted from the monitoring circuit, and wherein the CPU cooling part comprises a cooling fan cooling the CPU, a fan driving part driving the cooling fan, and a fan driving controller controlling the fan driving part according to a detected internal temperature of the CPU, the control method further comprising:

allowing the fan driving controller to control the power cut-off circuit to cut off the power supplied from the power supply part when the detected internal temperature of the CPU exceeds a predetermined BIOS reference temperature after information of the detected internal temperature of the CPU is inputted to the CPU cooling part.

15. The control method of the computer system according to claim 14, wherein the predetermined BIOS reference temperature is stored in the BIOS ROM.

16. A computer system having a CPU, a BIOS ROM to store a BIOS to perform a POST, and a power supply part to supply power to the CPU and the BIOS ROM, comprising:
a temperature sensor to detect an internal temperature of the CPU;
a power control circuit to cut off the power supplied from the power supply part when the internal temperature of the CPU that is detected by the temperature sensor exceeds a predetermined monitoring reference temperature;
a CPU cooling part to cool the CPU according to the internal temperature of the CPU that is detected by the temperature sensor; and
a selection part to selectively connect the temperature sensor to one of the power control circuit and the CPU cooling part.

17. The computer system according to claim 16, wherein the power control circuit comprises:
a monitoring circuit to generate a predetermined power controlling signal when the internal temperature of the CPU that is detected by the temperature sensor exceeds the predetermined monitoring reference temperature; and
a power cut-off circuit to cut off the power from the power supply part when the predetermined power controlling signal is inputted from the monitoring circuit.

18. The computer system according to claim 17, wherein the selection part comprises:
a first switching circuit to be turned on/off so that the temperature sensor and the power control circuit are connected and/or disconnected;
a second switching circuit to be turned on/off so that the temperature sensor and the CPU cooling part are connected and/or disconnected; and
a switching control circuit to selectively turn on one of the first switching circuit and the second switching circuit.

19. The computer system according to claim 18, wherein the switching control circuit turns on the first switching circuit and turns off the second switching circuit so that the temperature sensor is connected to the power control circuit when power is initially supplied.

20. The computer system according to claim 19, wherein the BIOS stored in the BIOS ROM controls the switching control circuit so that the first switching circuit can be turned off and the second switching circuit is turned on, to thereby allow the temperature sensor and the CPU cooling part to be connected to each other during performing the POST.

21. The computer system of claim 1, wherein the temperature sensor is a thermal diode, and wherein the resistance of the thermal diode is changed corresponding to the internal temperature of the CPU.

22. The computer system of claim 6, wherein the fan driving part is a motor.

23. The computer system of claim 7, wherein when the second switching part is on, the I/O controller receives the internal temperature of the CPU from the temperature sensor and controls a rotation speed of the fan driving part according to the internal temperature.

24. The computer system of claim 1, wherein the temperature sensor is embedded within the CPU.

25. The computer system of claim 3, wherein the first switching circuit is turned on/off so that the monitoring circuit and the power cut-off circuit are connected and/or disconnected.